

Claims

1. A polypeptide comprising a portion of the sequence of the general formula (I):
 CNPGSGGRKVFELVGEPSIYCTSNDDQVGIWSG (1)
 of 6 to 23 amino acids in length and comprising sequence a) and/or b):
- 5 a) GGRKVF
 b) FELVGEPSIY
2. A polypeptide according to claim 1, comprising cysteine residues at the C and N termini to provide a molecule capable of forming a cyclic molecule bridged by a disulphide bond.
- 10 3. A polypeptide according to claim 1 having chemically reactive amino acids at the N or C-terminal ends optionally further derivatised or derivatisable to provide a route for chemical linkage to other peptides or chemicals.
4. A polypeptide according to claim 3 wherein the terminal amino acid is cysteine and the derivative is S- (2-pyridyl) dithio.
- 15 5. A polypeptide according to ~~any preceding claim~~ ^{claim 1} altered at specific amino acids to remove chemically reactive amino acids.
6. A multimeric polypeptide comprising two or more polypeptides according to ~~any preceding claim~~ ^{claim 1}, linked to a core structure.
7. A multimeric polypeptide according to claim 6 wherein the core structure is a lysine derivative.
- 20 8. A multimeric polypeptide according to claim 7 wherein the core structure is (lys)₄(lys)₂ lys ala or Tris (aminoethyl) amine and 1,2,4,5 benzene tetracarboxylic acid.
9. A multimeric polypeptide according to claim 6 or 7 having two to eight polypeptides according to any of claims 1 to 5.
10. A chimaeric polypeptide in which a polypeptide according to ~~any of claims 1 to 5~~ ^{claim 1} is inserted in or substituted for sequences not essential to the overall architecture or folding pathway of a host protein.
11. A chimaeric polypeptide according to claim 10 in which the host protein contains one or more SCR repeat.
- 30 12. A chimaeric polypeptide according to claim 10 in which the host protein is a plasma protein.
13. A polypeptide according to claim 1 selected from:
 linear CNPGSGGRKVFELVGEPSIYC
 S-S linked cyclic CNPGSGGRKVFELVGEPSIYC
 SGRKVFELVGEPSIYC
 CGGRKVFC
 FELVGEPSIYSTSNDDQVGIWSG

14. A multimeric polypeptide according to claim 6 which is (Lys)₄ (Lys)₂ Ala - OH) linked through N-(ε-thiopropionyl) linkers disulphide bonded to cysteine thiol of the peptide

SGGRKVFELVGEPSIYC

5 15. A process for preparing a polypeptide according to ~~any preceding claim~~ ^{claim 1} which comprises condensing appropriate peptide units, and thereafter optionally chemically linking the polypeptide to a core structure.

16. A process for preparing a polypeptide according to ~~any preceding claim~~ ^{claim 1} which process comprises expressing DNA encoding said polypeptide in a recombinant host cell and recovering the product, and thereafter optionally chemically linking the polypeptide to a core structure.

17. A DNA polymer comprising a nucleotide sequence that encodes the polypeptide according to ~~any of claims 1 to 5 or 10 to 12~~ ^{claim 1}.

15 18. A replicable expression vector capable, in a host cell, of expressing the DNA polymer of claim 17.

19. A host cell transformed with a replicable expression vector of claim 18.

20. A pharmaceutical composition comprising a therapeutically effective amount of a polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1} and a pharmaceutically acceptable carrier or excipient.

20 21. A polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1} for use as an active therapeutic substance.

22. A polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1} for use in the treatment of a disease or disorder associated with inflammation or inappropriate complement activation.

25 23. A method of treating a disease or disorder associated with inflammation or inappropriate complement activation comprising administering to a subject in need of such treatment a therapeutically effective amount of a polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1}.

30 24. The use of a polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1} in the manufacture of a medicament for the treatment of a disease or disorder associated with inflammation or inappropriate complement activation.

25. A method for treating a thrombotic condition in a subject in need of such treatment comprising administering to a human or animal in need of this treatment an effective amount of a polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1} and an effective

35 amount of a thrombolytic agent.

26. A method for treating adult respiratory distress syndrome (ARDS) in a subject in need of such treatment, comprising administering to the patient an effective amount of a polypeptide according to ~~any of claims 1 to 14~~ ^{claim 1}.

27. A method of delaying hyperacute allograft or hyperacute xenograft rejection in a subject in need of such treatment which receives a transplant by administering an effective amount of a polypeptide according to ~~any of claims 1 to 14.~~ *claim 1*
28. A method of treating wounds in a subject in need of such treatment by administering by either topical or parenteral routes, an effective amount of a polypeptide according to ~~any of claims 1 to 14.~~ *claim 1*
- 5 29. A method of treating Alzheimer's Disease by administering to a subject in need of such treatment an effective amount of a polypeptide according to ~~any of claims 1 to 14.~~ *claim 1*
- 10 30. A method of treating CNS inflammatory disorders by administering to a subject in need of such treatment an effective amount of a polypeptide according to ~~any of claims 1 to 14.~~ *claim 1*
31. The use of a polypeptide according to ~~any of claims 1 to 14~~ and an effective amount of a thrombolytic agent in the manufacture of a medicament for the treatment of a thrombotic condition. *claim 1*
- 15 32. The use of a polypeptide according to ~~any of claims 1 to 14~~ in the manufacture of a medicament for the treatment of adult respiratory distress syndrome (ARDS) in a subject in need of such treatment, comprising administering to the patient an effective amount of a polypeptide according to ~~any of claims 1 to 14.~~ *claim 1*
- 20 33. The use of a polypeptide according to ~~any of claims 1 to 14~~ in the manufacture of a medicament for delaying hyperacute allograft or hyperacute xenograft rejection. *claim 1*
34. The use of a polypeptide according to ~~any of claims 1 to 14~~ in the manufacture of a medicament for treating wounds. *claim 1*
- 25 35. The use of a polypeptide according to ~~any of claims 1 to 14~~ in the manufacture of a medicament for treating Alzheimer's Disease. *claim 1*
36. The use of a polypeptide according to ~~any of claims 1 to 14~~ in the manufacture of a medicament for treating CNS inflammatory disorders. *claim 1*

add B!

add 3!